



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/382,438 | 08/25/1999 | WILLIAM R. GARDNER | QCPA990482 | 5232 |
| 23696 | 7590 | 11/07/2003 | EXAMINER | |
| Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714 | | | RYMAN, DANIEL J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2665 | |

DATE MAILED: 11/07/2003

21

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|----------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/382,438 | GARDNER ET AL. |
| | Examiner | Art Unit |
| | Daniel J. Ryman | 2665 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10/14/2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 10-28 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 10-28 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____ .

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . 6) Other: _____

DETAILED ACTION

Response to Arguments

1. In view of the Appeal Brief filed on 10/14/2003, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-19 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10

USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 10 recites the broad recitation "at least one reverse link frequency bin", and the claim also recites "the reverse frequency bin" which is the narrower statement of the range/limitation. For the purposes of prior art rejections, Examiner will interpret "the reverse frequency bin" to read "the at least one reverse link frequency bin". Claim 17 recites the broad recitation "at least one reverse link frequency bin", and the claim also recites "reverse frequency bins" which is the narrower statement of the range/limitation. For the purposes of prior art rejections, Examiner will interpret "reverse frequency bins" to read "the at least one reverse link frequency bin".

5. The term "substantially similar" in claim 28 is a relative term which renders the claim indefinite. The term "substantially similar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For the purposes of prior art rejections, Examiner will interpret the phrase "a frequency range substantially similar" as "a frequency range similar".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. Claims 10-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. (USPN 5,604,730) in view of Illidge (USPN 6,101,394).
8. Regarding claims 10, 17, and 20, Tiedemann discloses a method and apparatus in a wireless communication system, the method comprising steps of and the apparatus comprising means for: designating a forward link having a plurality of forward link frequency bins (forward packet channel) (Fig. 7 and col. 5, lines 16-26); and designating a reverse link having at least one reverse link frequency bin (reverse packet channels) (Fig. 8 and col. 5, lines 27-38), wherein the forward link frequency bins and the at least one reverse link frequency bin are designated such that bandwidth of the forward link is allocated differently from bandwidth of the reverse link (col. 5, lines 1-5 and col. 5, lines 31-39). Tiedemann does not disclose that the forward link is a multi-carrier forward link. Illidge teaches, in a CDMA system, using a multi-carrier forward link in order to increase the capacity of the system (col. 1, lines 9-21). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a multi-carrier forward link in order to increase the capacity of the system.
9. Regarding claims 11, 18, and 21, referring to claims 10, 17, and 20, Tiedemann in view of Illidge discloses selecting a first forward link frequency bin from the plurality of forward link frequency bins for forward link transmission (Tiedemann: col. 5, lines 1-63), the first forward

link frequency bin having an associated first reverse link frequency bin (Tiedemann: col. 5, lines 1-63); and selecting a second reverse link frequency bin for reverse link transmission corresponding to the forward link transmission wherein the second reverse link frequency bin is different from the first reverse link frequency bin (Tiedemann: col. 5, lines 1-63).

10. Regarding claim 12, referring to claim 11, Tiedemann in view of Illidge implicitly disclose that the selecting a second reverse link frequency bin is based on loading of the system (Tiedemann: col. 1, lines 48-58 and col. 5, lines 16-45).

11. Regarding claim 13, referring to claim 11, Tiedemann in view of Illidge discloses selecting a third reverse link frequency bin for reverse link transmission corresponding to the forward link transmission, wherein the third reverse link frequency bin is different from the first and second reverse link frequency bins (Tiedemann: col. 5, lines 1-63) where “one or more reverse packet channels” includes three packet channels.

12. Regarding claim 14, referring to claim 10, Tiedemann in view of Illidge discloses that the plurality of frequency bins comprises a number of frequency bins (Tiedemann: Fig. 7 and col. 5, lines 16-26). Tiedemann in view of Illidge does not expressly disclose that the plurality of forward link frequency bins comprise three frequency bins. However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value.

The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d

618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Since Tiedemann in view of Illidge disclose that the plurality of frequency bins comprises a number of frequency bins, it would have been obvious to have the number of frequency bins be any number of bins, including three bins, absent a showing of criticality by Applicant.

13. Regarding claim 15, referring to claim 10, Tiedemann in view of Illidge discloses that the plurality of forward link frequency bins are adjacent frequency bins (Tiedemann: Fig. 7 and col. 5, lines 1-46) where the frequency bins are adjacent in time.

14. Regarding claim 16, referring to claim 11, Tiedemann in view of Illidge discloses that the multi-carrier forward link is adapted for transmission of a plurality of code channels (Tiedemann: col. 5, lines 16-26), wherein one of said plurality of code channels is used to communicate power control information for said second reverse link frequency bin (Tiedemann: col. 6, lines 56-61) where a code channel and a frequency bin are equivalent.

15. Regarding claim 19, referring to claim 18, Tiedemann in view of Illidge discloses receiving by the first device an indication of a reverse link frequency bin (Tiedemann: col. 5, lines 31-46) where the overhead message contains an indication of a reverse frequency bin.

16. Regarding claim 22, referring to claim 10, Tiedemann in view of Illidge does not expressly disclose that that the designations of the forward and reverse link includes allocating more bandwidth for the forward link than the reverse link. However, Tiedemann in view of Illidge discloses that the forward link includes control information, such as synchronization, in addition to individual channel information while the reverse link only includes individual channel information (Tiedemann: Figs. 7 and 8 and col. 5, lines 1-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to allocate more bandwidth

for the forward link than the reverse link in order to ensure that the forward link contains enough bandwidth for control information.

17. Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. (USPN 5,604,730) in view of Illidge (USPN 6,101,394) as applied to claim 10 above, and further in view of Applicant's admitted prior art.

18. Regarding claim 23, referring to claim 10, Tiedemann in view of Illidge does not disclose that the designation of the forward link includes configuring the forward link as a cdma2000 3X forward link. Applicant discloses that cdma2000 3X forward links are well known in the art since cdma2000 expands "the capabilities of the preceding technologies to include wireless e-mail, Web browsing, and corporate and local network access, as well as videoconferencing, e-commerce and multimedia" (page 4, lines 1-page 6, line 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to configure the forward link as a cdma2000 3X forward link in order to allow the wireless system to expand the capabilities of the preceding technologies.

19. Regarding claim 24, referring to claim 23, Tiedemann in view of Illidge in further view of Applicant's admitted prior art discloses that the forward link includes first, second, and third carriers (Illidge: col. 1, lines 9-21 and Applicant: page 4, lines 1-page 6, line 8 and Applicant: page 4, lines 1-page 6, line 8).

20. Regarding claim 25, referring to claim 24, Tiedemann in view of Illidge in further view of Applicant's admitted prior art suggests that the first, second, and third carriers occupy first, second, and third adjacent frequency bins, respectively (Tiedemann: col. 5, lines 16-45 and Applicant: page 4, lines 1-page 6, line 8).

21. Regarding claim 26, referring to claim 25, Tiedemann in view of Illidge in further view of Applicant's admitted prior art suggests that the designation of the reverse link includes configuring the reverse link as a cdma2000 1X reverse link (Tiedemann: col. 5, lines 16-45 and Applicant: page 4, lines 1-page 6, line 8).
22. Regarding claim 27, referring to claim 26, Tiedemann in view of Illidge in further view of Applicant's admitted prior art discloses that the reverse link includes a fourth carrier (Tiedemann: col. 5, lines 16-45 and Applicant: page 4, lines 1-page 6, line 8).
23. Regarding claim 28, referring to claim 27, Tiedemann in view of Illidge in further view of Applicant's admitted prior art suggests that the fourth carrier is located in a frequency range similar to the second frequency bin (Tiedemann: col. 5, lines 16-45 esp. col. 5, lines 31-38 and Applicant: page 4, lines 1-page 6, line 8).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

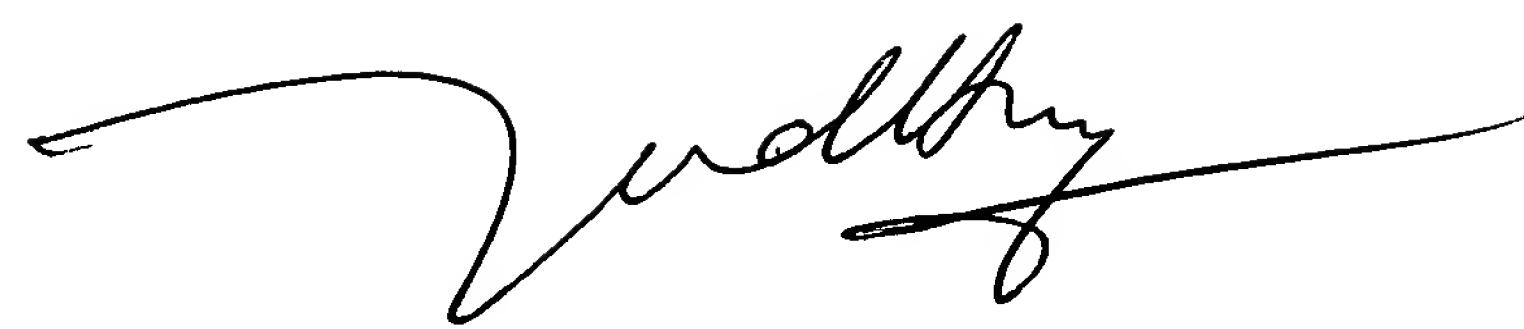
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

Daniel J. Ryman



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600